

## Claims

- 1) Method for increasing yield of a plant compared to corresponding wild type plants, comprising modulating expression in a plant of an isolated nucleic acid sequence encoding a TAD protein, or a homologue, derivative or active fragment thereof and/or modulating activity of a TAD, a homologue, derivative or active fragment thereof.
- 2) Method according to claim 1, wherein said modulation is effected by recombinant means and/or chemical means.
- 3) Method according to claim 1 or 2, wherein said modulating expression comprises introducing into a plant a nucleic acid sequence encoding a TAD protein or a homologue, derivative or active fragment thereof.
- 4) Method according to any of claims 1 to 3, wherein said increased yield comprises increased seed yield.
- 5) Method of claim 4, wherein said increased seed yield comprises at least an increase in the number of filled seeds.
- 6) Method of claim 4, wherein said increased seed yield comprises at least an increase in total seed weight.
- 7) Method of claim 4, wherein said increased seed yield comprises at least an increase in Harvest Index.
- 8) Method of any of claims 1 to 7, wherein said nucleic acid sequence encoding a TAD protein is derived from a plant.
- 9) Method according to any of claims 1 to 8, wherein said modulated expression is overexpression compared to corresponding wild type plants.
- 10) Construct comprising:
  - a. a nucleic acid sequence capable of modulating expression of a nucleic acid encoding a TAD protein and/or activity of a TAD protein;
  - b. one or more control sequences capable of driving expression of the nucleic acid sequence of (a)

c. a transcription termination sequence.

- 11) Construct according to claim 10, wherein said nucleic acid encodes a TAD protein.
- 12) Method for the production of a transgenic plant having increased yield compared to corresponding wild type plants, which method comprises:
  - a. introducing into a plant or plant cell a nucleic acid sequence or a portion thereof encoding a TAD protein or a homologue, derivative or active fragment thereof;
  - b. cultivating the plant cell under conditions promoting regeneration and mature plant growth.
- 13) Transgenic plant having increased yield compared to corresponding wild type plants, characterised in that said transgenic plant has modulated expression of a nucleic acid sequence encoding a TAD protein and/or modulated activity of a TAD protein.
- 14) Transgenic plant of claim 13, wherein said modulated expression and/or modulated activity is increased expression and/or increased activity, compared to corresponding wild type plants.
- 15) Transgenic plant according to claim 13 or 14, wherein said plant is a crop plant such as soybean, sunflower, canola, alfalfa, rapeseed or cotton, preferably a monocotyledonous plant such as sugarcane, most preferably a cereal, such as rice, maize, wheat, millet, barley, sorghum.
- 16) Transgenic plant cells, transgenic plant parts, including harvestable parts, propagules, seeds or progeny, of a plant according to any of claims 13 to 15.
- 17) Use of a nucleic acid sequence encoding a TAD protein and/or of a TAD protein for increasing yield.
- 18) Use of claim 17, wherein said increased yield comprises increased seed yield.
- 19) Use of claim 18, wherein said increased seed yield comprises at least one of increased number of filled seeds, increased total weight of seeds or increased Harvest Index.
- 20) Use of a transgenic plant according to any of claims 13 to 15, plant parts or seeds thereof for processing.